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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,055	04/14/2004	William T. Newport	ROC920030403US1	6098
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IBM CORPORATION, INTELLECTUAL PROPERTY LAW DEPT 917, BLDG. 006-1 3605 HIGHWAY 52 NORTH ROCHESTER, MN 55901-7829			EXAMINER	
			MERCHANT, SHAHID R	
			ART UNIT	PAPER NUMBER
			3694	
			MAIL DATE	DELIVERY MODE
			11/15/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/824,055

**Applicant(s)**

NEWPORT, WILLIAM T.

**Examiner**

SHAHID R. MERCHANT

**Art Unit**

3694

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 9-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of the Claims***

1. This action is in response to the amendment filed on February 8, 2008.
  - Claims 1-20 are pending.
  - Claim 8 have been cancelled.
  - Claims 1-2, 5 and 12-17 have been amended.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

3. Claim 12 objected to because of the following informalities: computer-readable medium. Applicant is advised to recite a "tangible" or "non-transitory" computer readable medium in the preamble of the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 and 9-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Serkin et al, U.S. Patent Application Publication 2003/0229567 (see PTO-892, Ref. A) in view of Basoglu et al., U.S. Patent Application Publication 2004/0073639 (see PTO-892, Ref. E).

6. As per claim 1, Serkin teaches a computer-implemented method for dynamically scaling order processing in a securities exchange, comprising:

maintaining, in a memory device, one or more books for a security at the securities exchange, wherein the one or more books each list orders related to the security (see paragraph 31);

monitoring a volume of orders related to the security received at the securities exchange (see paragraph 47);

varying the number of books maintained for the security based on the order volume per book (see paragraph 47);

distributing orders related to the security and received at the securities exchange among the books maintained for the security (see paragraphs 45-47); and

balancing the orders among the books, as stored in the memory device (see abstract and paragraphs 33-34).

Serkin does not explicitly teach monitoring, by operation of an application program executing on one or more processors and establishing, by operation of the application program, an average order volume per book, wherein the average order volume is established by dividing the volume of orders by the number of books maintained for the security.

Basoglu explicitly teaches monitoring, by operation of an application program executing on one or more processors and establishing, by operation of the application program, an average order volume per book, wherein the average order volume is established by dividing the volume of orders by the number of books maintained for the security (see paragraphs 34 and 36-48). Examiner notes that Basoglu is directed towards "interactions" of users placing loads on servers rather than orders for securities as Serkin discloses. Basoglu discloses a method of determining the average load per server based on interactions by dividing total volume of load by the number of servers. This is analogous to determining an average order volume per book by dividing the volume of orders by the number of books maintained for the security.

Therefore, it would be prima facie obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Serkin and Basoglu to have computer software balance the monitored order volume among the books and determine an average order volume per book by dividing the volume of orders by the number of books maintained for the security because it would increase the efficiency of processing orders as the number of securities processors increases, the number of trades capable of being handled is increased also as taught by Serkin (see paragraph 45).

7. As per claim 2, Serkin and Basoglu teach the method of claim 1 as described above. Serkin further teaches wherein varying the number of books maintained for the security based on the order volume per book comprises:

upon determining if the order volume per book related to the security exceeds a maximum threshold value (see paragraph 47);

opening a new book for the security (see paragraph 47).

Basoglu explicitly teaches average order volume per book (see paragraphs 37-43).

Therefore, it would be prima facie obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Serkin and Basoglu to use an average order volume per book to balance the load on servers because it would increase the efficiency of processing orders as taught by Serkin (see paragraphs 45-46).

8. As per claim 3, Serkin and Basoglu teach the method of claim 2 as described above. Serkin further teaches wherein opening a new book for the security comprises creating a logical partition (see paragraph 47).

9. As per claim 4, Serkin and Basoglu teach the method of claim 2 as described above. Serkin further teaches wherein opening a new book for the security comprises allocating one or more processors to the new book (see paragraphs 46-47).

10. As per claim 5, Serkin and Basoglu teach the method of claim 2 as described above. Serkin further teaches wherein varying the number of books maintained for the security based on the order volume per book further comprises:

upon determining if the order volume per book related to the security falls below a minimum threshold value (see paragraphs 46-47);

closing one or more books maintained for the security (see paragraphs 46-47).

Basoglu explicitly teaches average order volume per book (see paragraphs 37-43).

Therefore, it would be prima facie obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Serkin and Basoglu to use an average order volume per book to balance the load on servers because it would increase the efficiency of processing orders as taught by Serkin (see paragraphs 45-46).

11. As per claim 6, Serkin and Basoglu teach the method of claim 5 as described above. Serkin further teaches wherein the maximum threshold value and the minimum threshold values are different (see paragraph 47).

12. As per claim 7, Serkin and Basoglu teach the method of claim 1 as described above. Serkin further teaches wherein maintaining one or more books for the security at the exchange comprises maintaining at least one book for the security on at least two different servers (see paragraph 46).

13. As per claim 9, Serkin and Basoglu teach the method of claim 1 as described above. Serkin further teaches further comprising publishing the top of each book maintained for the security (see paragraphs 3, 5, 36, 37 and 42).

14. As per claim 10, Serkin and Basoglu teach the method of claim 9 as described above. Serkin further teaches further comprising matching an order listed on one of the books maintained for the security with one of the other books maintained for the security (see paragraphs 40, 41 and 43).

15. As per claim 11, Serkin and Basoglu teach the method of claim 9 as described above. Serkin further teaches further comprising matching an order listed on one of the books maintained for the security with a book maintained for the security at another exchange (see paragraph 32).

16. Claims 12 and 17 recites similar limitations to claim 1 and thus rejected using the same art and rationale in the rejection of claim 1 as set forth above.

17. As per claim 13, Serkin and Basoglu teach the computer-readable storage medium of claim 12 as described above. Serkin further teaches wherein varying the number of books maintained for the security based on the order volume of per book comprises: upon determining if the order volume per book related to the security exceeds a maximum threshold value, notifying an administrator and providing the administrator with an interface allowing the administrator to open a new book (see paragraph 47).

Basoglu explicitly teaches average order volume per book (see paragraphs 37-43).

Therefore, it would be prima facie obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Serkin and Basoglu to use an average order volume per book to balance the load on servers because it would increase the efficiency of processing orders as taught by Serkin (see paragraphs 45-46).

18. Claim 14 recites similar limitations to claim 2 and thus rejected using the same art and rationale in the rejection of claim 2 as set forth above.



19. As per claim 15, Serkin and Basoglu teach the computer-readable storage medium of claim 12 as described above. Serkin further teaches comprising providing an interface allowing an administrator to specify the maximum threshold value (see paragraph 47).

20. As per claim 16, Serkin and Basoglu teach the computer-readable storage medium of claim 12 as described above. Serkin further teaches providing an interface allowing an administrator to specify how orders related to the security and received at the exchange should be distributed among the books maintained for the security (see paragraphs 31 and 45-47).

21. As per claim 18, Serkin and Basoglu teach the computer system of claim 17 as described above. Serkin further teaches wherein the one or more books maintained for the security at the exchange comprises:

at least a first book for the security maintained on a first server; and

at least a second book for the security maintained on a second server (see paragraph 46).

22. As per claim 19, Serkin and Basoglu teach the computer system of claim 17 as described above. Serkin further teaches wherein the one or more books are maintained on a computer system having multiple logical partitions (see paragraph 47).

23. As per claim 20, Serkin and Basoglu teach the computer system of claim 19 as described above. Serkin further teaches wherein each book is assigned to a different logical partition (see paragraph 47).

***Conclusion***

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **SHAHID R. MERCHANT** whose telephone number is (571)270-1360. The examiner can normally be reached on First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Art Unit: 3694

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/Shahid R Merchant/  
Primary Examiner, Art Unit 3694